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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,981	02/25/2004	Giancarlo Traversa	38741/GM/lp	8968

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EXAMINER

WU, IVES J

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/784,981	TRAVERSA ET AL.	
	Examiner	Art Unit	
	Ives Wu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/15/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

(1). Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The use of the phrase "preferably" to link a broad range of values renders the claim 3 to be vague. It is not clear which range controls the actual meter and bounds of the claimed subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- (2). Claims 11 - 14 recite the limitation "said syrup" and "with respect to the syrup" in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(3). **Claims 1-5, 8, 10 and 11** are rejected under 35 U.S.C. 102(b) as being anticipated by Schock (US005218013A).

(4). Schock discloses a compound such as a built-in sink, a washhand basin or the like consisting of a compound made of resin forming a matrix and filler comprised, at least predominately, of quartz particles, the majority of the quartz particles have a size of between 0.1 mm and 2 mm, the filler constitutes about 60 to 80 wt% of the compound (Abstract). A preferred composition of the free-flowing mixture to be processed is described: (1). 74% to 76% by wt of crystalline quartz sand. (2). 24% to 26% by wt of a solution of polymethyl methacrylate in methyl methacrylate, in which the proportion of the polymethyl methacrylate in this solution lies between 18% to 25% by wt. (3). 1.2 wt% (with relation to the resin) of a peroxy catalyst. (4). 0.2% to 0.4% by wt of bonding agent. (5). 2 wt% of a crosslinking agent (Col. 6, line 60 – Col. 7, line 3). It is known the resin to form the matrix of the compound is dyed if the components are supposed to be colored (Col. 3, line 39-42). The patentee proposes a completely different approach for manufacturing colored components. The mineral filler particles that have a color coating on their surface are used as filler (Col. 3, line 49-53). As a further improvement for components according to the patentee's invention, it is advisable to make the matrix colorless. It has proven particularly expedient to use a color coating which contains at least one color pigment and, as binder, at least one silicate, in particular, a plastic, in particular, (meth)acrylate (Col. 3; line 60 – Col. 4, line 4).

(5). As to the thermosetting composite material in the **independent claim 1**, the disclosure of Schock meets the requirements of the present claim 1 both in terms of the types of materials

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added and matrix form with fillers. It is reasonable to presume that the composition of the Schock would fulfill as a thermosetting composition material as presently claimed in light of their chemical similarities. The burden is shifted to applicants to establish that the thermosetting composite material of present claim 1 is not the same as or obvious as that set forth by the Schock.

As to the glass particles as filler in the **independent claim 1**, and **dependent claims 8 and 10**, Schock discloses the fillers to be crystalline quartz sand as well as mineral fillers. It is well known in the art that the glass is made of the same elements of crystalline quartz sand as well as mineral fillers. Therefore, the fillers of Schock would also be glass particle fillers.

As to the polymer matrix to be syrup of polymethyl methacrylate in methyl methacrylate in **dependent claim 5**, in view of the substantially identical composition of polymer matrix disclosed by Schock and by applicant, the solution of polymethyl methacrylate in methyl methacrylate of Schock would also be used as a syrup (Syrup: a viscous liquid with d 1.313, page 1116, Hawley's Condensed Chemical Dictionary, 11th Ed).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(6). **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Schock (US005218013).

As to the catalyst to be 0.5 to 0.8% in the **dependent claim 6**, Schock disclose the peroxy catalyst to be 1.2 wt% (with relation to the resin), in absence of showing the criticality of the records, the optimization values of catalyst amount from 0.5 to 0.8% used in a known process renders *prima facie* obviousness within one ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

(7). **Claims 7, 9, 13 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schock (US005218013) in view of Traversa et al (US20010041234A1).

As to the limitation of **dependent claim 7**, Schock does not teach the coloring fractions at a concentration from 1 to 5 wt% with respect to the matrix.

However, Traversa et al (US20010041234A1) teach the need to introduce in the mix coloring pastes which give an appropriate coloring to the polymeric matrix and are added at concentrations between 1 and 5 wt% ([0039]).

In absence of showing the criticality of the records, the advantage of using from 1 to 5 wt% coloring fraction in the matrix is due to the optimization value of this range in a known process. Therefore, it renders *prima facie obviousness* within an ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As to the limitation of **dependent claims 9 and 14**, Schock **does not teach** the use of filler material coated a layer of organofunctional silane and amount to be 0.5 to 1 wt% of organofunctional silane in the syrup.

However, Traversa et al **teach** the filler of crystalline quartz particles are advantageously subjected to a silanization process (a treatment which coats the particles with organofunctional silanes) ([0028], line 1-4).

The advantage of coating the filler particles with organofunctional silanes is to facilitate adhesion between the organic matrix and inorganic filler, generally improving the mechanical characteristics of a composite material and particularly in toughness, i.e., its ability to withstand impacts and instantaneous stresses ([0028], line 4-8).

Therefore, it would have been obvious at time the invention was made to include the silane treatment on the filler particles of Traversa et al for the fillers in the composition of Schock in order to obtain the aforementioned advantage.

As to the amount of 0.5 to 1 wt% of organofunctional silane in the **dependent claim 14**, in the absence of showing the criticality of the records, the optimization values of amount for organofunctional silanes used in a known process renders *prima facie obviousness* within an ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As to the limitation of **dependent claim 13**, Schock **does not teach** the use of an antissettling agent in an amount of 0.2 to 1 wt%.

However, Traversa et al **teach** the superdispersed amorphous pyrogenic silica ([0040], line 2) in a concentration between 0.01 to 1 % (see claim 10 of Traversa et al (US20010041234A1)).

The advantage of using the superdispersed amorphous pyrogenic silica is to control the settling of the filler ([0040], line 1). The addition of the superdispersed pyrogenic silica is important because it acts as a settling prevention agent ([0059], line 1-3).

Therefore, it would have been obvious at time the invention was made to use superdispersed amorphous pyrogenic silica in a concentration between 0.01 to 1 % taught by Traversa et al in the composition of Schock in order to obtain the aforementioned advantage.

(8). **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Schock (US005218013A) in view of Kobayashi et al (GB 2333297A).

As to the limitation of **dependent claim 12**, Schock **does not teach** the use of release agent in amount of 0.1 to 0.2 wt% in the syrup.

However, Kobayashi et al teach the composition including 0 – 50 parts by wt of internal mold release agent (page 6, line 13-18) in the Example.

The advantage of using mold release agent is to easily take out the article from the mold when it is cured completely.

Therefore, it would have been obvious at time the invention was made to use the mold release agent in amount of 0 – 50 part by wt taught by Kobayashi et al in the composition of Schock in order to obtain the aforementioned advantage.

As to the amount of 0.1 to 0.2 wt% in the **dependent claim 12**, in the absence of showing the criticality of the records, the optimization values of amount for release agent used in a known process renders *prima facie obviousness* within an ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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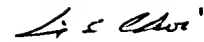
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Examiner: Ives Wu

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Date: December 8, 2005



LING-SUI CHOI
PRIMARY EXAMINER